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Elementary Physical Education: Fitness sessions or whole-child development?

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Abstract

Physical education is being positioned as an important vehicle for combating public health concerns such as increases in the rates of childhood obesity and physical inactivity. However, programs that emphasize physical fitness may neglect opportunities to develop students' learning in cognitive, social, and emotional domains. By considering how physical education has been conceptualized in policy and in research, this paper draws on holistic education theories to argue that school physical education programs may be in danger of becoming too narrow in their focus. Several holistic approaches to physical education are presented, and their potential for providing children with positive learning experiences is discussed.

Introduction

> Elementary physical education has on the one hand been heralded as important, for benefits such as health, fitness, exercise, social interaction, motor development, skill development, and more recently obesity control, yet on the other hand often absent in practice, under-researched, and therefore under-theorised with respect to the rhetoric around claims made to justify its presence within the curriculum.
>
> (Hunter, 2006, p. 580.)

The elementary school years are a critical period for children to develop the physical, social, emotional, and cognitive skills necessary to lead a healthy, active lifestyle (Graber, Locke, Lambdin, & Solmon, 2008). School physical education (PE) programs can provide a learning environment suitable to teach the skills needed for healthy living. PE programs have garnered attention in government policy and in the popular media recently because it is believed that increasing the amount of physical activity will assist in combating childhood obesity and physical inactivity (McKenzie & Kahan, 2008). Therefore, several PE initiatives have been introduced into Canadian schools. For example, Ontario and Alberta now require elementary students to participate in at least 20 and 30 minutes, respectively, of daily vigorous physical activity in addition to their regular PE programs. The implementation of such initiatives may seem to be an overwhelming endorsement of PE and other school-based physical activity programs. Recent reports indicate, however, that such programs do little to affect levels of childhood obesity (Harris, Kuramoto, Schulzer, & Retallack, 2009). Similar movement-based programs that mainly emphasize the physiological effects of exercising have also been criticized for neglecting the development of cognitive or social skills and for providing few meaningful educational experiences for children – experiences that provide children with the requisite skills, attitudes, and knowledge to apply what they have learned outside of school (Kirk, Colquhoun, & Gore, 1988; Morgan & Hansen, 2008). Ontario's Daily Physical Activity initiative may be a case in point, as this particular program involves no assessment of a student's learning.

Using a holistic education framework to think about the role of PE as a school subject, this paper explores how PE has been conceptualized in the literature and in schools since the 1960s. Further, it is shown that limited understandings of the nature of PE have contributed to it being devalued as a legitimate site for learning across various domains of knowledge. Examples of PE programs that focus on the whole child and aim to develop skills in several domains are provided, and recommendations are offered for improving PE programs in the future.

Theoretical Framework: Holistic Education

Dewey (1916, 2005) claimed that if education was to be effective its goal was not only to prepare students for life, but also to engage students wholly in life at the present moment. Noddings (1992) suggested that for holistic education to exist in practice many aspects of life should be explored as part of the formal curriculum. A holistic view of education sees schooling as being more than simply learning facts or skills; there is a focus on relationships, such as those between mind and body, and those between various domains of knowledge (Miller, 1993). For example, holistic approaches to education recognize strong connections between knowledge, pleasure, emotions, ethics, aesthetics, the body, and human action (Beck & Kosnik, 2006).

According to Beck and Kosnik (2006), while specialized academic disciplines are important, knowledge ultimately has meaning within a way of life. If students in school are to achieve deep understanding of the self, their lives, and the lives of others, they need opportunities to experience and develop a whole way of life and bring this to bear on their academic learning, and vice versa. Often linked with constructivist learning theories, holistic education provides a useful way to think of the role of PE in the elementary curriculum because health and education are multi-dimensional concepts and, essentially, holistic in nature (Anderson, 2007). The following discussion uses holistic education as a lens to consider the extent to which PE programs have articulated, or have the potential to offer, learning experiences across multiple domains of human existence.

Background

Physical Education In Elementary School Curricula

Defining PE and its perceived role in schools can be a difficult process considering limited and broad definitions of the subject exist. Kirk (1992) stated, "the *meaning* of physical education has been the source of contestation and debate for many, many years, and different groups both inside and outside the subject have held quite conflicting views on what physical education is and why it should be part of the school curriculum" (p. 13). Although an extensive description of what PE is and what it should include is beyond the scope of this paper, a brief history of the meanings of PE in the past half century may give context to some current debates of the role of PE in Canadian schools.

The curricular content of many North American PE programs throughout the early and mid 20th century was shaped by the drills, fitness, and competitive sports commonly found in gymnastics or military training programs (Graber et al., 2008). Gymnastics and physical training models continued to form the basis for most PE curriculum in the western world up until the 1970s, with a main objective being to teach the physical skills considered valuable in the education of young males (Phillips & Roper, 2006). For example, it was thought that the types of physical activities included in early PE curricula could develop mental toughness and strength of character (Phillips & Roper). PE classes were often taught separately to boys and girls, where cultural stereotypes of appropriate movement and character for boys and girls were reinforced (Kirk, 2003). Physical training activities involved series of repetitive exercises (Phillips & Roper), where a typical lesson might consist of an instructor shouting commands for students to perform; being told to perform 20 push-ups, 10 chest passes, or 5 forward rolls may sound familiar to readers when they recall their own PE classes. While students may have developed physical fitness or motor coordination, they may have gained little from these lessons in terms of cognitive, social, or emotional development. In gymnastics or physical training-style lessons, students may not have learned, for example, why developing strength is important, nor is it likely that would they have learned how to incorporate motor skills into different contexts such as competitive game situations or recreational activities. Indeed, an evaluation of the effectiveness of an early daily physical education initiative in Australia found that teachers tended to use the program to 'blow away the cobwebs' in preparation for other academic work (Kirk & Colquhoun, 1989). Moreover, the historically gendered nature of physical activity meant that boys and girls were socialized into activities that were deemed appropriate for their gender (Kirk, 2003). For example, activities that required grace and flexibility, such as dance, were thought to be most suitable for girls (Flintoff & Scraton, 2006), while activities requiring strength and power, such as rugby, were thought most appropriate for boys (Gard, 2006). The limited outcomes made available to students from the physical training models can represent a particular shortcoming of PE in schools. Peters (1966) believed that an education should consist of study of academic disciplines, and emphasize primarily cognitive pursuits. As such, when based on the physical training model and using Peters's (1966) narrow notion of an educationally worthwhile pursuit, PE was

often perceived as inferior compared to other subjects because of its predominantly practical, rather than cognitive nature (McNamee, 2005).

To address criticisms that PE was limited to purely physical, practical activities, much PE research in the past 40 years attempted to justify the inclusion of PE in the curriculum based on scientific and intellectual merit (Anderson, 2002). PE researchers tried to elevate the status of PE according to Peters's (1966) criteria that for something to be deemed an educationally worthwhile pursuit, it needed to have some cognitive grounding. Thus, many PE researchers relied on principles related to physical health, motor development, human skill acquisition, and sports psychology to show the cognitive nature of physical activities (Fernandez-Balboa, 1997; Kirk & Tinning, 1990). In the 1980s and early 1990s, the majority of articles in PE journals such as the *Journal for Teaching in Physical Education* and *Research Quarterly for Exercise & Sport* showed the influence of human movement research in the field of PE pedagogy. Laker (2001) suggested that justifying the scientific, intellectual merit of PE in educational research and curriculum studies may have further eroded the place of PE in schools, arguing that the nature of scientific research has meant that the technical, rather than the humanistic, side of PE teaching has been focused upon. The technical side of PE teaching has lent itself to performance-oriented, competitive approaches to physical activity (Tinning, 1997). Holt/Hale, Ezell, and Mitchell (2000) commented that such emphases contribute little to the overall goals of education, and even less to the development of healthy people.

Recent developments in research and curriculum theorizing have led to a broader understanding of the role of PE, which is evident in the research literature and in curricular initiatives. For example, PE researchers have applied constructivist theories of learning to develop programs that view teachers as facilitators and students as active players in teaching and learning, as opposed to the more traditional methods of direct instruction commonly used in early physical training models (Lee, 2003). While the focus on the micro-teaching aspects of teaching and learning has added some valuable knowledge to the field, inquiries into broader social and cultural issues surrounding PE are more evident now than in the past. Examples include investigations in PE settings of teamwork and cooperation (Dyson, 2001), the development of positive personal and social behaviours (Hellison, 2003), and discourses of femininity and masculinity in the gymnasium (Martino & Beckett, 2004; Tischler & McCaughtry, 2009).

As well, current goals for PE extend well beyond developing only students' physical capabilities; for example, the British Columbia Ministry of Education (1995) stated that "students who participate in regular physical education classes enjoy enhanced memory and learning, better concentration, and increased problem-solving abilities. They are willing to take appropriate risks, and have a more positive attitude towards self and others" (p. 1). Today's PE curricula present a wider variety of sports, games, and recreational activities, forms of dance, and exploratory movement for students to learn and to participate in. PE teachers now utilize different approaches to teaching PE which are informed by various theories of teaching and learning, such as constructivism or critical theory (for examples of these approaches, see Fernandez-Balboa, 1997; Laker, 2001). However, despite advances in the way PE is thought about and taught, Hardman and Marshall (2000) claimed that school PE is in a perilous position in all continental regions of the world. They argued that PE is still viewed by some teachers and administrators as no more than a component of play and leisure rather than as an integrated, essential part of the educational process, and a space where little, if any, cognitive learning occurs,. These views of schooling and education echo those of Peters (1966) as described above. As well, Graham (2008) stated that PE is often viewed as providing "a break from the rigours of classroom academic work routines that allows children to 'blow off steam' before returning to the classroom" (p. 242). Moreover, when compared to other subject areas in Canada, PE programs have experienced disproportionate financial cuts (Tremblay, Pella & Taylor, 1996). For example, Robinson and Melnychuk (2006) claimed that eliminating PE specialist teachers and consultants in school boards has become a common practice across Canada which may have far-reaching effects on the quantity and quality of elementary PE programs.

While members of the PE community have made efforts to justify the presence of PE in the elementary curriculum amongst themselves and in academic circles, what more can be done to improve the meaning and value of PE to educators, students, and community members? The objectives of PE programs have been, for some years, to improve students' physical, social, emotional, and cognitive development, yet there have been few specific examples of how such objectives can be achieved. Articulating holistic strategies and curricular models that highlight how outcomes in various domains can be achieved may be one way to raise the profile of PE in schools to the broader educational community.

Holistic Approaches to Physical Education

PE programs which focus on physical skill development are still the dominant approach in some schools; however, an increase in PE research has meant that strategies for teaching and learning in PE have increased, and there are several curricula and instructional models that reflect diverse teaching philosophies. For example, the Teaching Games for Understanding (TGfU) model developed by Bunker and Thorpe (1982) applies constructivist principles to the learning of games and sports, while the Teaching Personal and Social Responsibility (TPSR) (Hellison, 2003) model encourages students and teachers to be self-aware and actively engage in personal reflection to develop social and emotional skills. Furthermore, adventure education integrates physical, emotional, and social learning, typically in outdoor settings, to help students develop a variety of skills. These three approaches to teaching PE are discussed briefly.

Teaching Games for Understanding (TGfU)

For games taught using a TGfU approach, students form small groups and learn skills in the context of modified game-play (Bunker & Thorpe, 1982). Recent research has demonstrated how TGfU can develop students' skills in a variety of domains. For example, students classified as high- or low-skilled participating in a 12-lesson basketball unit improved in their motor skill performance (physical development) and tactical decision-making (cognitive) using a TGfU approach (Nevett, Rovegno, Babiarz, & McCaughtry, 2001). A recent adaptation of the TGfU model includes tenets of situated learning theory, where relationships are investigated among various physical, social, and cultural dimensions of the learning contexts (Dyson, 2005; Kirk & MacPhail, 2002). In the TGfU model students work in small groups and rely on each other to help solve a variety of tactical problems that arise during a game; thus, teaching and learning social skills is an integral part of a TGfU program (Dyson, 2005). Focussing on preservice classroom teachers rather than school students, Light (2003) found that TGfU provided a positive emotional learning experience for some preservice teachers who had not enjoyed PE when they were school students. This experience provided the preservice teachers with a new way to think about PE and how it is taught, and motivated them to integrate the TGfU model in their practice teaching placements. The TGfU approach is being continually adapted, modified, and extended by researchers and practitioners to include, among other things, the principles of social constructivism; a holistic learning theory which is based on the belief that human developmental domains are integrated, and an education need not privilege one over the other (Dyson, 2005). Schools and school boards are also recognizing the benefits of adopting the TGfU model, and the new K-12 PE curriculum in Ontario to be implemented in 2009/2010 places an emphasis on building thinking skills, social skills, and movement competence. This identifies TGfU as a suitable approach to achieve such aims.

Teaching Personal and Social Responsibility (TPSR)

Another approach to teaching PE uses the TPSR model (Hellison, 2003). Originally designed for underserved and at-risk youth and based on principles of moral and character development, TPSR encourages students to respect themselves and others, be willing to participate in PE, be self-directed and identify their needs, and develop their own physical activity programs. It focuses also on the caring for others by cooperating, giving support, showing concern, and helping. While movement activities and PE classes are the main contexts for using TPSR, engaging only in physical activity is not enough to achieve the program's objectives; that is, teachers must also include individual counselling time, awareness talks, group meetings, and journaling personal reflections in each lesson. In conjunction with various cultural resources, the Saskatchewan Ministry of Education (1995) recommended TPSR to help students gain a personal-social-cultural perspective throughout its elementary PE curriculum. The TPSR model represents a shift from thinking about PE as developing solely physical proficiency to focusing equally on the social and emotional development of students.

Adventure Education

Brown (2006) described adventure education as experiential education programs that are conducted in an outdoor setting and/or involve physical engagement in an activity that provides a sense of challenge to participants. In a similar manner to TPSR, participants in adventure education typically reflect on the program activities and their actions on social and emotional levels. Physical aspects of adventure education can also be integrated with other components of the formal school curriculum, such as science or geography. The holistic nature of adventure education is summarized by Henderson and Potter (2001, p. 231), who stated that "adventure is at its best when felt

through the hands, within the head, and of the heart." Although adventure education can occur in wilderness settings such as nature camps, elements of this approach are often integrated in school PE programs. Activities that foster teamwork, cooperation, and personal challenge are common in adventure education programs, such as orienteering activities that require a group to navigate a course are common, and can be done on nature trails, or around a school campus. Regardless of the setting, Brown (2006, p. 685) outlined that the "key point being that the participant is actively engaged in the learning endeavour, preferably in a holistic manner which requires physical, mental, and emotional commitment."

Conclusions and Recommendations

The three examples of holistic approaches to PE are not exhaustive, and other programs such as Sport Education (Siedentop, Hastie, & van der Mars, 2004) and Sport for Peace (Ennis, 1999) aspire to similar holistic aims. Further, teachers would most likely use more than one approach over one academic year. The examples provided do, however, illustrate how PE has evolved from early approaches that were limited to developing physical fitness or motor skills to aspire to develop the whole child. PE may still be considered a peripheral subject by some educators and community members (Fullan, 2007), yet it represents a mandatory part of the curriculum in most Canadian elementary schools. As outlined in this paper, it is the type of PE that is being taught in elementary schools that is of concern. Physical activity initiatives that are dominated by fitness sessions may be beneficial for students' physical and motor skill development, but this may come at the expense of cognitive, social, and emotional development. As well, justifying the place of PE in the curriculum according to its scientific merit may have limited rather than broadened the appeal of PE in schools.

Adopting some of the holistic approaches to teaching PE may partially address such concerns, but teachers of elementary PE are placed in a difficult position due to their own knowledge of and preparation for teaching that subject. For instance, the majority of elementary school students in Canada are taught PE by a regular classroom teacher rather than a PE specialist (Cameron, Wolfe, & Craig, 2007). For example, in Ontario, Dwyer et al. (2008), stated that 63% of elementary PE classes are taught by a regular classroom teacher. In their pre-service teacher education, most elementary classroom teachers complete no more than one required course in elementary PE, where opportunities to learn about holistic or alternative approaches to teaching PE may be limited. Furthermore, many preservice elementary teachers do not have opportunities to observe or teach PE in their field placements; a situation that is insufficient to instill a sense of confidence and willingness to teach a complex subject in a dynamic, open environment such as a gymnasium or playground (Graber et al., 2008). The situation in elementary schools stands in contrast to that in secondary schools, where most students are taught PE by a specialist teacher. This is most likely someone who has completed an undergraduate degree in exercise science, kinesiology, or a similar field. When completing a one or two-year teacher preparation program, most secondary teacher candidates complete several teaching methods courses in PE. As some provincial ministries of education include holistic approaches such as TGfU and TPSR in their curriculum documents (e.g., Saskatchewan Ministry of Education, 1995), it is likely that pre-service specialist PE teachers are exposed to different approaches to teaching PE. Moreover, specialist PE teachers often have knowledge of, or resources for, a wide variety of activities that may not be typically addressed in Canadian PE programs, such as yoga, tai-chi, or cricket. Of benefit to students, those who are taught PE by a specialist rather than their classroom teacher are more likely to demonstrate higher levels of motor performance, fitness, and enjoyment of physical activity (Sallis et al., 1997). Addressing this issue, the government of New Brunswick recently announced an increase in funding over several years to be allocated to hiring specialist PE teachers in elementary schools (New Brunswick Dept. of Education, 2008); however, the specialist/generalist issue is still present in most other provinces.

If increases in funding for hiring specialist teachers are not forthcoming, the role of pre-service teacher education institutions takes on greater importance. When asked about the PE programs that they attended when they were school students, most elementary PE teachers reported having negative views (Morgan & Hansen, 2008). Although the PE component of pre-service elementary teacher education programs is usually brief, PE teacher educators should use the time to critically reflect on and deconstruct the nature of the PE programs that they experienced as school students (Morgan & Hansen, 2008). However, exposing pre-service teachers to a wide variety of PE program alternatives may mean that pre-service teachers do not connect with any program at all, and in keeping with holistic education perspectives, Beck and Kosnik (2006) suggested that teacher educators should aim to provide deep understanding of the principles of only one or two curricular options. As well, PE programs have been identified as a potential solution to address concerns about childhood obesity. However, a danger may be posed to

development of the whole child if PE programs once again give greater priority to developing only their students' physical development. Schools should not abandon pursuits which are aimed at developing physical or motor skills; but like Dewey (1916, 2005), Noddings (1992) and, more recently in health and PE research, Anderson (2007), PE programs and teachers should aim to develop the whole child, and provide a variety of experiences that promote the development of cognitive, social, emotional, and physical skills.

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